Title (en)

Power semiconductor device current detector circuit and detection method

Title (de)

Schaltung und Verfahren zur Leistungshalbleiterelementstromerkennung

Title (fr)

Circuit de détecteur de courant de dispositif de semi-conducteur d'alimentation et procédé de détection

Publication

EP 2439545 A3 20171206 (EN)

Application

EP 11184204 A 20111006

Priority

JP 2010228103 A 20101008

Abstract (en)

[origin: EP2439545A2] To provide a small power semiconductor device current detector circuit and detection method with low loss by detecting current using the sensing function of a power semiconductor device. An already known current is caused to flow through a main region of the power semiconductor device, the current is detected by a current detector unit connected to a sense terminal of the power semiconductor device, a deviation in characteristics between the main region and a sensing region is detected by a variable voltage source circuit based on the detected current, and an offset amount and gain amount in an output regulator are regulated in such a way that the characteristics of the two coincide. In this case, it is also possible to supply the offset amount and gain amount to be regulated to the output regulator, serially or in parallel, from a CPU provided externally.

IPC 8 full level

G01R 19/00 (2006.01); **G01R 31/26** (2014.01); **G01R 31/42** (2006.01)

CPC (source: EP US)

G01R 19/0092 (2013.01 - EP US); G01R 31/2607 (2013.01 - EP US); G01R 31/42 (2013.01 - EP US)

Citation (search report)

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Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2439545 A2 20120411; **EP 2439545 A3 20171206**; CN 102565502 A 20120711; CN 102565502 B 20160330; JP 2012085407 A 20120426; JP 5724281 B2 20150527; US 2012086424 A1 20120412; US 8659864 B2 20140225

DOCDB simple family (application)

EP 11184204 A 20111006; CN 201110310819 A 20110930; JP 2010228103 A 20101008; US 201113243931 A 20110923